

Badger Talk by Enda Mullen, Pumphouse, Thursday May 2nd 2013;

FORAGING EURASIAN BADGERS (*Meles meles*) AND THE PRESENCE OF CATTLE IN PASTURES. DO BADGERS AVOID CATTLE?

There was a good attendance at the May talk by Enda Mullen, the District Conservation Officer for Wicklow. The subject of badgers arouses keen interest in many due to the issue of Bovine Tuberculosis (bTB) but that was not the initial focus of Enda's study. The project in which Enda was involved was a survey of badger population, territories and the effects of roadworks on them around the notorious Balinasheeda Bend on the N11. Here the road is a narrow single-carriageway where traffic is concentrated and slowed down, visibility is reduced and accidents common. The road is to be straightened and widened, this work has only just been approved and begins straight away (if that's the word). The Wicklow N11 Badger Study (also called the Potters River Study) by Mullen, MacWhite, Maher, Kelly, Marples and Good of the National Parks and Wildlife Service (NPWS) and the Department of Agriculture, Forestry and the Marine (DAFM) is intended to study the local badger population before, during and after the road construction, and if possible, to advise on how to allow badgers to cross this new road, major roads and dual carriageways being major barriers to badger movement.

The local habitat is farmland with pasture, mixed with woodland, dominated by the Balinasheeda Wood, drained by Potter's River and divided by the soon-to-be expanded N11.

The initial work was to count the badgers and work out territorial boundaries and the range of badger movements. This was done by providing attractive bait –peanuts in treacle, laced with small pieces of indigestible but harmless plastic- placed under hefty stones close to main setts with a different colour plastic for the badgers of each sett. Badgers go to the toilet in latrines along their paths and around territorial boundaries and the colour of plastic in the latrines showed which group, or which sett, the visiting badger belonged to. If two colours showed up in one latrine, it was classed as an 'edge latrine' on the edge of two territories and used by two badger groups. Most badger groups in Ireland are pairs, one adult of each sex, and their cubs, the bigger groups of 5 to 9 adults found in parts of Britain are not typical of badgers in Ireland or mainland Europe.

Then funding was secured for more research and GPS collars were put on study badgers. These were usually cage trapped close to the sett, some were caught with choke-proof snares. Each was then anaesthetised (knocked out) using a pole syringe for the user's safety, then weighed, their teeth examined, blood-tested, micro-chipped, tattooed with a 4-digit number, swabbed for and vaccinated against bTB and only fitted with the collar if it was old and big enough. Any badger under 8 kilograms was not collared, the average weight was 9.384 kilograms (that's 20 lbs 11 oz in the old money, badgers are heavy for their size). Each was then put in a recovery box next to the sett so they could slip into their own home once they recovered. The cage-trapping must have been so traumatic that some were trapped repeatedly, attracted by the bait. A male, Mucky Jack, was trapped practically every night so another trap had to be set up in that territory just for him. The bait must have been worth it, as good as a whole night's forage in one meal. A re-trapped badger was released.

The collar weighed 240 grams and was carefully fitted not to fall off but not to get in the badger's way either. It could detach and fall off the badger when signalled to do so. The

badgers behaved normally when collared, soon ignoring their new outfit. This was the Autumn when badgers fatten up for the lean winter. One female put on a kilo in the week after collaring. Weight watch programs and Operation Transformations mean nothing to badgers, try nagging one into losing weight, it won't be the badger crying...

The results from the collars were different from the earlier latrine study and showed territories to be larger and range use more wide than previously indicated, including routine crossings of the N11 (sadly 21 badgers were killed on the roads in that time). Farmers on whose land the studies took place were given access to the results and could see badger movements for the previous two days. One farmer noted how the badgers on his land seemed to avoid his cattle. Enda and the others concentrated on his farm to see if they could find any trends of badgers approaching or avoiding cattle during 3 months of foraging in pasture. This farmer bred pedigree Limousins and kept meticulous records of which field, and which divided portion of each field, he kept cattle on each day. He divided his fields into paddocks and cattle were moved among them periodically with, at any given time, more paddocks empty than occupied. The farm was included in two badger territories; the Quarry Sett occupied by Billy and his un-named collar-free better half, and the B+ Sett of collar-wearers Dinny and Sheila. Sheila seemed less respectful of territory borders than the two males.

Out of 223 'badger days', each day being a date when a badger was recorded in a paddock, 24% found a badger in a cattle-occupied paddock and 74% in a paddock without cattle. Some paddocks were preferred whether cattle were there or not, when a paddock was itself subdivided for weanling calves, the unoccupied end of the paddock was favoured. So the results showed the badgers do avoid cattle but still can encounter them. The grazing systems matter also. Cattle themselves ignore foxes but may be hostile to badgers, advancing on them (as I've seen them advance on the farm's own dog one time, they looked quite menacing and the dog was only too glad to be ordered back to the yard). This may be a reason for badgers to keep out of their way. Studies with 'proximity collars' on badgers and cattle (that give out signals when collars are within 2 meters of each other) showed that cattle and badgers do get close but not often. The badger keeps its distance. This reduces the threat of direct TB transmission, inhaling spores from another's breath, but may leave indirect transmission from contamination of food, troughs, licks or the ground.

This was only one subject being covered in the ongoing N11 Badger Study, diet (badgers are so fond of maize that is hard to tempt them into cage traps with the usual bait on land where maize is grown), reproduction, mortality and seasonal activity (older badgers sit out most of the winter in the setts) are also being examined. Badger lifestyles vary over their very extensive range and each population needs to be studied in its own right. UK based research findings do not apply too closely to Irish or European badgers and the effects of changes in the landscape and especially in human activities need to be tracked. This study is one such project on an Irish native whose face is as familiar as a pet dog's but who otherwise is as mysterious to the Irish public as the Tibetan snow leopard.

John Kinsella